WHAT IS CLAIMED IS:

1. A method for fabricating a structure in the form of a plate comprising at least one substrate (2), a superstrate (3) and at least one intermediate layer (4) interposed between the substrate and the superstrate, characterized in that it consists in selecting an intermediate layer (4) comprising at least one base material having distributed therein atoms or molecules termed extrinsic atoms or molecules which differ from the atoms or molecules of the base material, and applying a heat treatment to said structure (1) so that, in the temperature range of said heat treatment, the intermediate layer is plastically deformable and the presence of the selected extrinsic atoms or molecules in the selected base material causes the irreversible formation of micro-bubbles or micro-cavities (7) in the intermediate layer.

2. The method as claimed in claim 1, characterized in that the heat treatment produces micro-bubbles or micro-cavities which weaken said intermediate layer.

3. The method as claimed in claim 1, characterized in that the heat treatment produces a rupture of said intermediate layer and, as a result, separation of the substrate and the superstrate.

4. A method for separating the substrate and superstrate in the structure obtained by the method as claimed in any one of the preceding claims, characterized in that it consists in applying forces between the substrate (2) and the superstrate (3) to bring about the rupture of the intermediate layer between the substrate and the superstrate due to the presence of said micro-bubbles or micro-cavities.

5. A method for separating the substrate and superstrate in the structure obtained by the method as claimed in any one of claims 1 to 3, characterized in that it consists in chemically attacking the intermediate layer (4) of the structure to at least partially remove said intermediate layer between the substrate and the superstrate.

6. The method as claimed in any one of the preceding claims, characterized in that the substrate (2) and the superstrate (3) are formed from monocrystalline silicon and the intermediate layer (4) is formed from doped silica.

7. A method for fabricating silicon wafers, characterized in that it consists in:

producing a structure (1) in the form of a plate comprising a substrate (2) formed from silicon, a superstrate (3) formed from silicon and a dielectric intermediate layer (4) comprising at least one base material having distributed therein atoms or molecules termed extrinsic atoms or molecules which differ from the atoms or molecules of the base material;

then applying a heat treatment to said structure so that, in the temperature range of the heat treatment, the intermediate layer is plastically deformable and so that the presence of the selected extrinsic atoms or molecules in the selected base material causes the irreversible formation of micro-bubbles or micro-cavities (7) in the intermediate layer (4).

8. The method as claimed in claim 7, characterized in that the base material is formed from silica and the extrinsic atoms are atoms of phosphorus or boron, thus forming an intermediate layer of phospho-silicate glass (P.S.G.) or boro-phospho-silicate glass (B.P.S.G.).

9. The method as claimed in claim 8, characterized in that the concentration of phosphorus is in the range from 6% to 14%.

10. The method as claimed in claim 8, characterized in that the concentration of boron is in the range from 0% to 4%.

11. The method as claimed in any one of claims 7 to 10, characterized in that the heat treatment is carried out at a temperature in the range from 900°C to 1200°C.

12. The method as claimed in any one of claims 7 to 11, characterized in that it consists, prior to said heat treatment, in carrying out an operation for depositing said intermediate layer (4) on the substrate (2), or respectively the superstrate (3), and attaching the superstrate, or respectively the substrate, to said intermediate layer (4) by molecular wafer bonding.

13. The method as claimed in any one of claims 7 to 12, characterized in that, on the intermediate layer (4) side, the substrate and the superstrate respectively comprise a thermal silicon oxide (5, 6).

14. The method as claimed in any one of claims 7 to 13, characterized in that it consists in exerting forces on said structure (1) in a manner such that rupture of said intermediate layer is brought about, resulting in separation of the substrate and superstrate due to the presence of said micro-bubbles or micro-cavities (7) to obtain a wafer constituted by the substrate (2) and/or a wafer constituted by the superstrate (3).

15. The method as claimed in any one of claims 7 to 14, characterized in that it consists in chemically attacking said intermediate layer (4) of said structure (1) to bring about separation of the substrate and superstrate due to the presence of said micro-bubbles or micro-cavities to obtain a wafer constituted by the substrate (2) and/or a wafer constituted by the superstrate (3).

16. The method as claimed in any one of the preceding claims, characterized in that it consists in producing projecting portions (8) in the substrate (2) and/or the superstrate (3) on said intermediate layer (4) side.

17. The method as claimed in any one of the preceding claims, characterized in that the projecting portions (8) are rectilinear and extend to the sides of the intermediate layer (4).

18. The method as claimed in any one of the preceding claims, characterized in that at least some of said micro-bubbles or micro-cavities (7) are open-celled and at least some thereof constitute channels.

19. The method as claimed in any one of the preceding claims, characterized in that it comprises a supplemental step of reducing the thickness of said superstrate (3) and/or substrate.

20. The application of the method as claimed in any one of the preceding claims to the fabrication of silicon on insulator (S.O.I.) plates for the fabrication of integrated electronic circuits and/or integrated opto-electronic circuits.

21. A structure in the form of a plate comprising at least one substrate (2), a superstrate (3) and at least one intermediate layer (4) interposed between the substrate and the superstrate, characterized in that said intermediate layer (4) comprises at least one base material having distributed therein atoms or molecules termed extrinsic atoms or molecules which differ from the atoms or molecules of the base material so that, under the effect of a heat treatment, the intermediate layer (4) becomes plastically deformable and the presence of the selected extrinsic atoms or molecules in the selected base material causes the irreversible formation of micro-bubbles or micro-cavities (7) in the intermediate layer (4).

22. The structure as claimed in claim 21, characterized in that the substrate (2) and the superstrate (3) are formed from monocrystalline silicon and the intermediate layer (4) is formed from doped silica.

23. The structure as claimed in either of claims 21 and 22, characterized in that the base material is silica and the extrinsic atoms are atoms of phosphorus or boron, thus forming an intermediate layer of phospho-silicate glass (P.S.G.) or boro-phospho-silicate glass (B.P.S.G.).

24. The structure as claimed in claim 23, characterized in that the concentration of phosphorus is in the range from 8% to 14%.

25. The structure as claimed in claim 23, characterized in that the concentration of boron is in the range from 0% to 4%.

26. The structure as claimed in any one of claims 21 to 25, characterized in that the substrate and/or the superstrate have portions (8) projecting into said intermediate layer (4).

27. The structure as claimed in claim 26, characterized in that the projecting portions (8) are rectilinear and extend to the sides.

28. The structure as claimed in any one of claims 21 to 27, characterized in that at least some of said micro-bubbles or micro-cavities (7) are open-celled and at least some thereof constitute channels.